

Work Order ID 58414

May 6, 2010 10:33:04 AM

Page 1

Item ID: D6008-132

Accept

Revision ID:

Item Name: Crosstube extrusion

Start Date: 5/06/10

Start Qty: 20.00

Required Date: 6/30/10

Req'd Qty: 20.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D6008

Rev A

100

0.00



Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O:

11853

a) Order as per Dwg D6008

b) Material: 3.250 x 0.438 wall 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube

c) Minimum ultimate tensile strength = 77 ksi

d) Minimum tensile yield strength = 66 ksi

e) Tolerance are per ASTM B210 (see details on Dwg D6008)

f) Material certification required

C2101517

(20)

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure material certification is attached

C2101811

(10)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item ID: D6008-132

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube extrusion

Start Date: 5/06/10 Start Qty: 20.00



Cust Item ID:

Required Date: 6/30/10 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

8/10/08/13

(110)

Quality Control

Ensure Material certification comply to Dwg D6005

10 Revers to Datt. 17 eta to be retraced.

130

Identify as per dwg & Stock Location: *L.G*

0.00



Packaging

Memo

0.00

Packaging

MAT.#22

→ 70 P45 AUN 10-08-15

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/08/16

CL1018116

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 58414

Parent Item: D6008-132

Parent Item Name: Crosstube extrusion


Comments: IPP Rev:A New Issue 07-06-18 JLM

Start Date: 5/06/10

Required Date: 6/30/10

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Qty Issued	Date Issued	Status
D6008-132P		Purchased	No			110	Each	0.0000	1			
												
Crosstube extrusion												



C21018111

⑩

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

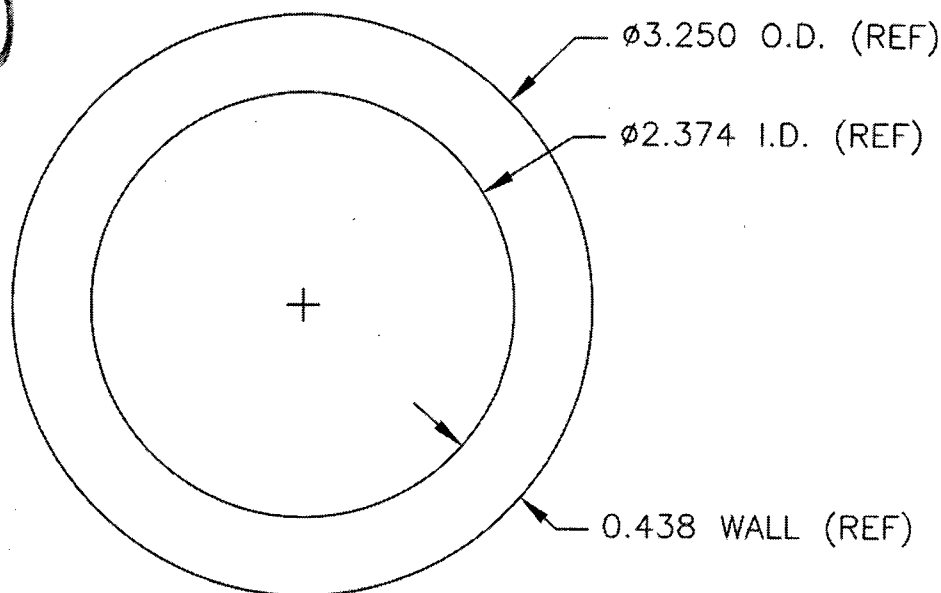


DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D6008	REV. A SHEET 1 OF 1
DATE 00.11.17		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	00.11.17	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24 *#*

CL1015/6
W10: 58414



NOTES

- 1) D6008-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 180" LONG TUBE: D6008-180

- 2) MATERIAL: 3.250 OD x 0.438 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.008 MEAN (± 0.016 INCLUDING OVALITY)
WALL: ± 0.020 MEAN (± 0.044 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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www.alunnatubes.com

page: 1
date: 20.07.2010
customer: 40980

delivery note

55347

your PO dated: 11.05.2010
your PO No.: PO11853 / PO12020
confirmation No.: 36643

contact: Petra Eisenblätter
Tel.: +(303) 755 5672
Fax: +(303) 755 5936
representative: CLAUD J. BETTER

CARRIER: Senator International
AWU VAT No.: DE177869055
Country of origin: Germany

We supply acc. to our delivery terms and conditions:

item	quantity	unit	net kgs
------	----------	------	---------

001	27,000	PC	
-----	--------	----	--

CD1018111 Reel 10

AWU article: 22917 / Tariff no. 76082081
Customer article: D6008-132 3.250 X 0.438 X 132
product: TUBES / seamless extruded / EN AW-7075 / round
condition: T 6511 / AMS-QQ-A-200/11

outer diameter:	3,250 INCH Tol.	+0,016	-0,016
tol. for mean OD		+0,008	-0,008
inner diameter:	2,374 INCH		
wall thickness:	0,438 INCH Tol.	+0,044	-0,044
fixed length	132,000 INCH Tol.	+0,125	

inspection cert. acc. to EN10204/3.1 / RM 531 / Rp0,2: 455

straightness 0,01 INCH / 1 FEET / RMS outer 25

tol. on quantity +15 % -15 %

3.250" OD 0.438" Wall, 132" lengths

Part Number D6008-132 crosstube

Surface Finish max. RMS 25

Tolerances per ASTM B210 / drawing D6008

Tubes protected with corrosion protective oil

Tubes line marked

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde: Dart Aerospace Ltd.
Client:

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 892/10

Cert No.: / No. du certificat:

Bestellnummer:

PO11853/PO12020

Order No. / No. de commande

Auftrag:

36643/1

Our Reference/Notre Reference:

Produkt:

Rohre nahtlos gepresst

Product / Produit:

Tubes seamless extruded

Spezifikation:

AMS - QQ - A - 200/11; -

Specification:

Werkstoff:

7075

Alloy/Alliage:

Zustand:

T 6511

Temper/État

Abmessung

3,250 INCH x 2,374 INCH x 0,438 INCH x 132,000 INCH

Size / Dimension

D6008-132 3.250 X 0.438 X 132

Kennzeichnung

ALUnna - Cert No. 892/10 - 7075 - T 6511 - Cast No. 3540 - AMS QQA 200/11 - 3.250" OD X 0.438" Wall - Heat Lot

Marking/Marquage:

No. 800916 - ALUnna Order Conf. No. 36643/1-1 PO. 11853/PO. 12020

Lieferung

pcs.

lbs

Country of Manufacture: Germany

Delivered Material / Matériel délivre:

27

1398

Products are in accordance with applicable RoHS

1. Chemische Analyse

Chemical Analysis / analyse chimique

Charge/ Cast No.	min.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
	max.	0,40	0,50	1,2	0,30	2,1	0,18	5,1	0,20					
3540/09		0,100	0,196	1,558	0,060	2,593	0,188	5,685	0,039	0,002	0,0291	0,0001	0,0013	0,0001

Hydrogen content: 0,10

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
min.	81,0	73,0	7,0			
max.						
1	89,320	83,230	10,0			800916 - 27 pcs.
2	88,595	81,925	9,0			10 pcs
						17 ship pack.

max. RMS 25 - max. 7,40 µ"

Ergebnis der Prüfungen:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

max. RMS 25 - max. 7,40 μ "

**Ergebnis der
Prüfungen:**

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KrampeR



Certified acc. DIN EN ISO 9001:2000 and DIN EN 9100:2003
valid until 2010-11-11

Cert.-Req. No.: 001959 QM; 001959 ASH

19.07.2010

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany

ALUnna

Abnahmebeauftragter